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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

WILLIAMS, THOMAS J

ART UNIT PAPER NUMBER

3683

DATE MAILED: 10/31/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/756,392

Applicant(s)

MATSUMOTO, HIROAKI

Examiner

Thomas J. Williams

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 September 2005.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-13 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 13, 2005 has been entered.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

4. Claim 11 recites the control unit finishes the brake force distribution *after* the vehicle stops. However, claim 1 recites the control unit finishes the brake force distribution *as* the vehicle stops. As best understood by the examiner the procedure in claim 1 is carried out *before* the vehicle comes to a stop, i.e. as occurring in the transitional period between when the vehicle speed falls below a predetermined threshold and when the vehicle speed reaches 0 mph. The procedure in claim 11 occurs after the vehicle has reached a speed of 0 mph. Thus it appears that claim 11 contradicts the limitations of claim 1.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

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A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-3, 10, 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,632,535 to Luckevich et al.

Re-claims 1 and 13, Luckevich et al. disclose a brake control apparatus, comprising: a brake pressure controlling unit (see figure 2); a control unit 62 performs brake force distribution control, Luckevich et al. disclose a known situation wherein the normally open valves for the rear wheels are opened and the distribution control is terminated immediately after the vehicle speed has reached a low speed limit, see column 5 lines 65-67. This is similar to the second situation disclosed by the applicant regarding figure 2 in the instant invention, wherein the dotted line indicates the termination of brake force distribution immediately after the vehicle speed reaches a low limit V_0 and described on page 14 paragraph 2. It is anticipated that the termination process in Luckevich et al. will occur after a frontward force applied to the vehicle is released and is prior to the stop of the vehicle, since the vehicle is technically still in motion after falling below the low speed limit.

Re-claims 2 and 3, the brake force distribution is terminated after the vehicle or wheel speed reaches a low limit.

Re-claim 10, see figure 2.

Re-claim 11, Luckevich et al. disclose as the present invention a termination of brake force distribution after the vehicle stops.

7. Claims 1, 4, 5, 10, 11 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by US 5,938,299 to Hara et al.

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Re-claims 1, 11 and 13, Hara et al. discloses a brake control apparatus, comprising: a brake pressure controlling unit (see figure 2); a control unit 60 performs brake force distribution control, brake force distribution is terminated when the vehicle speed or wheel speed falls below a low speed (see step 4, column 7 lines 50-53, this is similar to the dotted line situation in instant figure 2 as stated above) or wherein the distribution control is terminated after the vehicle has stopped and a frontward force applied to the vehicle is released (step 1, see column 7 lines 42-44), in either case the appropriate valves are opened.

Re-claims 4 and 5, the brake force distribution is terminated after an estimated deceleration is reduced to be smaller than a predetermined deceleration from when a wheel speed, or vehicle speed, is smaller than a predetermined value, see column 7 lines 53-56.

Re-claim 10, see figure 2.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Luckevich et al.

Re-claims 6 and 7, Luckevich et al. teaches the predetermined time frame as 1 second and not 300 msec. It would have been obvious to one of ordinary skill in the art as a matter of design choice to have reduced the time frame to 300 msec., since the applicant has not disclosed that having the predetermined time set at 300 msec. solves any stated problem or serves any

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particular purpose and it appears that the system of Luckevich et al. would have performed equally well with the predetermined time set at 300 msec. The reduced time would have allowed for quicker equalization of the cylinder pressures with the master cylinder.

Re-claim 8, Luckevich et al. teaches the predetermined wheel speed as being 2 km/h. It would have been obvious to one of ordinary skill in the art as a matter of design choice to have set the predetermined wheel speed at 2 km/h, since the applicant has not disclosed that having the predetermined wheel speed set at 2 km/h solves any stated problem or serves any particular purpose and it appears that the system of Luckevich et al. would have performed equally well with the predetermined wheel speed set at 2 km/h.

10. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hara et al.

Hara et al. teaches the predetermined wheel speed set at 6 km/h. and not at 2 km/h. It would have been obvious to one of ordinary skill in the art as a matter of design choice to have reduced the predetermined wheel speed to 2 km/h, since the applicant has not disclosed that having the predetermined wheel speed set at 2 km/h solves any stated problem or serves any particular purpose and it appears that the system of Hara et al. would have performed equally well with the predetermined wheel speed set at 2 km/h.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Luckevich et al. or Hara et al. in view of US 6,030,056 to Sawada et al.

Luckevich et al. and Hara et al. fail to specifically teach terminating the brake force distribution at a swing back time. Sawada et al. teach a system for terminating brake force distribution at a swing back time, which is the period immediately before the vehicle stops. This would seem to coincide with the period immediately after the vehicle speed falls below the low

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speed limit, at which time the brake force distribution is terminated. Thus it would seem the swing back time is the time just prior to a complete stop. Therefore it would have been obvious to one of ordinary skill in the art to have provided either Luckevich et al. or Hara et al. with a brake force terminating procedure coinciding with the swing back time as taught by Sawada et al., thus preventing any discomfort for the passengers in the vehicle by preventing swing back.

Response to Arguments

12. Applicant's arguments filed July 18, 2005 have been fully considered but they are not persuasive. Luckevich et al. disclose in column 5 lines 62-67 a situation in which the brake force distribution is terminated immediately after the vehicle has reached a low speed limit, but as not yet come a stop. This appears to describe the situation recited in instant claim 1. The time period associated with Luckevich et al., and argued by applicant, is not part of the scenario described in lines 62-67. But is rather a solution to a problem associated with the scenario described in lines 62-67. However, it is noted that the solution disclosed by Luckevich et al., i.e. terminating the brake force distribution after the vehicle has come to a complete stop, appears to anticipate claim 11, which requires the vehicle to come to a stop before the distribution is finished.

With regards to Hara et al., condition (4) describes a situation in which the distribution is terminated as the vehicle stops. This occurs when the vehicle speed falls below 6 km/h, which is interpreted by the examiner as a vehicle approaching a stop condition, since this is a very low speed.

The arguments regarding the swing back motion of the vehicle have been carefully considered by the examiner. However, it is the position of the examiner that the timing of a

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swing back condition is not clearly defined in the detailed description, specifically the relationship between the swing back and the termination of the brake force distribution. For instance, how is the frontward force released and when is this function performed? Therefore, as best understood by the examiner the prior art of record will terminate of the brake force distribution after a frontward force applied to a vehicle is released.

Conclusion

13. Any inquiries concerning this communication or earlier communications from the examiner should be directed to Thomas Williams whose telephone number is 571-272-7128. The examiner can normally be reached on Monday-Thursday from 6:30 AM to 4:00 PM. The examiner can also be reached on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James McClellan, can be reached at 571-272-6786. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-6584.

TJW

October 27, 2005

RECEIVED
PATENT EXAMINER

Thomas Williams
AU 3683
10-27-05